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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/595,893	06/20/2000	Jean-Rene' Lequepeys	012.P35017	5767

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EXAMINER

GHEBRETINSAE, TEMESGHEN

ART UNIT	PAPER NUMBER
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2611

SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
3 MONTHS	04/27/2007	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

Office Action Summary

Application No.

09/595,893

Applicant(s)

LEQUEPEYS ET AL.

Examiner

Temesghen Ghebretinsae

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 05 February 2007.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-7 and 12-31 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-7, 12-20, 23-26 and 29-31 is/are rejected.
- 7) ☒ Claim(s) 21-22, 27-28 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____

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DETAILED ACTION

1. It would be of great assistance to the Office if all incoming papers pertaining to a filed application carried the following items:

1. Application number (checked for accuracy, including series code and serial no.).
2. Group art unit number (copied from most recent Office communication).
3. Filing date.
4. Name of the examiner who prepared the most recent Office action.
5. Title of invention.
6. Confirmation number (See MPEP § 503).

Continued Examination Under 37 CFR 1.114

2. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 2/2/07 has been entered.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 1-7,12-15 rejected under 35 U.S.C. 103(a) as being unpatentable over Mochizuki (6,320,842) in view of Nee (Us2002/0186651).

Consider claims 1-4,12-15 as claimed. Mochizuki discloses data transmission process comprising at the transmission; means for divide in data into n data blocks (111); means for processing the n blocks in parallel in N $\pi/2$ DBPSK and DPBSK modulation channels (112-1-112-4; 113-A-113-D), each modulating using a group of spread codes (PN1-PNN); means for combining (117-1,117-2) the output from, the N parallel modulation and means for transmitting (118) the signal output from the means for combining (see figs. 9 and 12). At the receiver; means for processing the received signal in parallel in N DBPSK and $\pi/2$ DBPSK demodulation channel; the received data blocks being ranked according to energy or amplitude of associated portions of the received signals (by correlators 22-1-22-m, 22-23); and means for grouping (26) the data together in series and reproduce the transmitted data (figs. 3,5,7,10).

Mochizuki differs from the claimed invention in that the modulation scheme is not M-ary orthogonal keying modulation scheme. However, Nee discloses means for divide in the data to be transmitted into N blocks (12,14); means for processing the bocks in parallel in N M-ary orthogonal keying modulation channel (16,18) and means for transmitting. Thus, it would have been obvious to one of ordinary skill in the art at the time the invention was made to use the M-ary orthogonal keying modulation /demodulation scheme of Nee in the system of Mochizuki since the system of Mochizuki is not limited to the specific modulation/demodulation schemes.

As for claims 5-7,16-17, the number of spread codes (PN-1, PN-N) is the same in each group and the spread codes used are all different from one group to another (PN1-PN-N) and certain spread codes are used in several groups. (Code generator

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59,14,116)

As for claims 18-19, at the reception the signal received is processed in-group of filters (55-1-1, 55-m-2; fig. 2-3; 22-1-22-m fig. 7) distributed in N groups of filters.

Claim Rejections - 35 USC § 102

5. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

6. Claims 20, 26 are rejected under 35 U.S.C. 102(e) as being anticipated by Mochizuki.

7. Consider claims 20 and 26 as claimed now. Mochizuki discloses a receiver to processes a received signal comprising: a plurality of filters (22-23, 55-1, 55-m) to provide a plurality of portions of said received response of the received signal and adapted to rank the plurality of portions based, at least in part on amplitude or energy associated with portions; and a plurality of demodulators (25-1, 25-n) associated with the plurality of portions and adapted to demodulated said associated plurality of portions. (See fig. 7 and 3)

Claim Rejections - 35 USC § 103

8. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

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(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

9. Claims 23-25,29-31 are rejected under 35 U.S.C. 103(a) as being unpatentable over Mochizuki (6,320,842) in view of Nee (Us2002/0186651).

Consider claims 23-25,29-31 as claimed. Mochizuki discloses data transmission process comprising at the transmission; means for divide in data into n data blocks (111); means for processing the n blocks in parallel in N $\pi/2$ DBPSK and DPBSK modulation channels (112-1-112-4; 113-A-113-D), each modulating using a group of spread codes (PN1-PNN); means for combining (117-1,117-2) the output from, the N parallel modulation and means for transmitting (118) the signal output from the means for combining (see figs. 9 and 12). At the receiver; means for processing the received signal in parallel in N DBPSK and $\pi/2$ DBPSK demodulation channel; the received data blocks being ranked according to energy or amplitude of associated portions of the received signals (22-1-22-m, 22-23); and means for grouping the data together in series and reproduce the transmitted data (figs. 3,5,7,10).

Mochizuki differs from the claimed invention in that the modulation/demodulation scheme is not M -ary orthogonal keying modulation scheme. However, Nee discloses means for divide in the data to be transmitted into N blocks (12,14); means for processing the bocks in parallel in N M -ary orthogonal keying modulation channel (16,18) and means for transmitting. Thus, it would have been obvious to one of ordinary skill in the art at the time the invention was made to use the M -ary orthogonal keying

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modulation /demodulation scheme of Nee in the system of Mochizuki since the system of Mochizuki is not limited to the specific modulation/demodulation schemes.

Response to Arguments

10. Applicant's arguments filed 2/5/07 have been fully considered but they are not persuasive. Applicant argues that Mochizuki does not disclose data block being ranked according to energy or amplitude of associated portions of the received signal. However, examiner disagree with applicant's conclusion because the correlator of Mochizuki does the ranking of the associated portion of received signal according to energy or amplitude of the received signal.(see col.7, lines 33-49)

Allowable Subject Matter

11. Claims 21-22,27-28 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

12. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Temesghen Ghebretinsae whose telephone number is 571-272-3017. The examiner can normally be reached on Monday-Friday from 8 to 6. The examiner can also be reached on alternate .

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jay Patel, can be reached on 571-272-2988. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for

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published applications may be obtained from either Private PAIR or Public PAIR.

Status information for unpublished applications is available through Private PAIR only.

For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should

you have questions on access to the Private PAIR system, contact the Electronic

Business Center (EBC) at 866-217-9197 (toll-free).

Temesghen Ghebretinsae
Primary Examiner
Art Unit 2611

T.Ghebretinsae

4/25/07.

TEMEUGHEN GHEBRETINSAE
PRIMARY EXAMINER